

Road fatalities involving male pedestrians aged 15 to 54

Pedestrians comprise about one in every seven fatalities on Australian roads. Figure 1 shows that of 1,444 pedestrian fatalities throughout Australia between 1998 and 2002, 553 (38 per cent) were males aged 15 to 54 and 449 (31 per cent) were males and females aged 65+. Each of these contributions was well above what would be expected on the basis of population share.

As a result, this monograph focuses on fatalities among male pedestrians aged between 15 and 54 years and not the much smaller number of female fatalities.

This monograph is intended to complement ATSB Monograph 13, which provides an overview of fatalities among elderly pedestrians.

Information extracted from the ATSB's holdings of coronial documentation is summarised here for male pedestrians aged 15 to 54 involved in fatal collisions between 1997 and 1999 (the latest years for which detailed ATSB fatal road crash information is available).

These collisions occurred mostly between the hours of 6 pm and 6 am, particularly at the end of the working week and on weekends (see

Fig. 2), and were attributable to alcohol or other drugs in about two of every three instances.

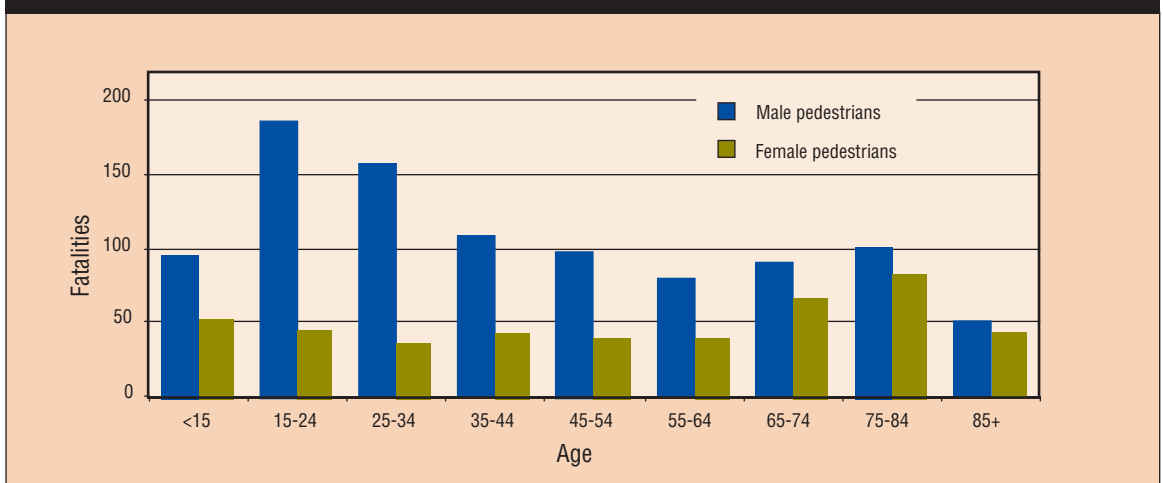
Toxicology results for the deceased male pedestrians indicated a predominance of alcohol intoxication and the frequent presence of cannabinoids.

Seventy per cent of the male pedestrians had a blood alcohol concentration (BAC) that would have made them ineligible to be in control of a motor vehicle. Of even greater concern is the extreme nature of these BACs. Five of every six alcohol-affected pedestrians had a BAC of 0.15 gm/100ml or greater (see Fig. 3).

Heavy intoxication is reflected in the manner in which many of the pedestrians came into collision with a vehicle. About one in every three of the pedestrians had been struck while simply standing or lying on the road. About one in every four pedestrians had been struck by the wheel or undercarriage of a vehicle.

Although the majority of fatal collisions occurred within cities and towns, the incidence of collisions out of town was much greater than would be expected on the basis of the population of those areas.

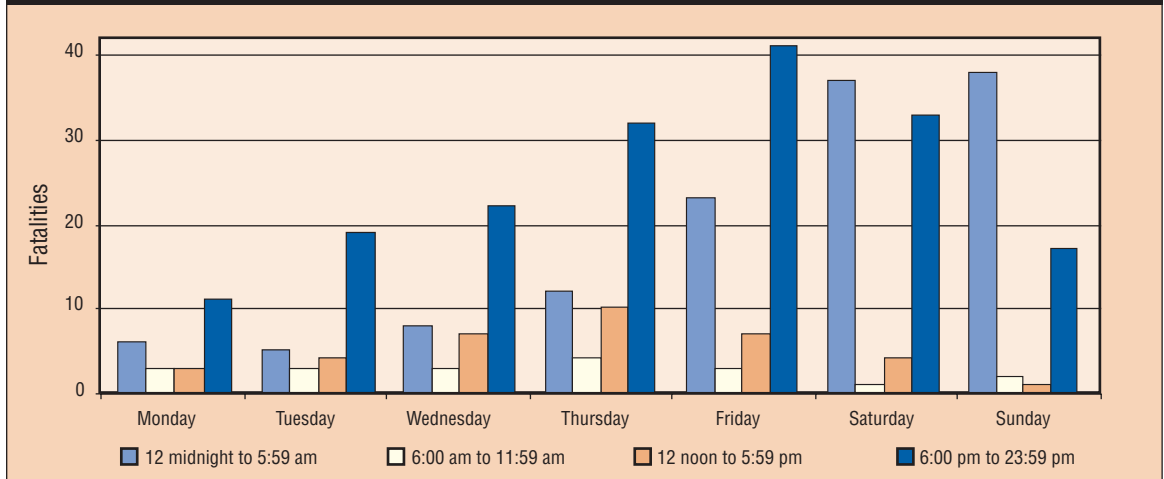
Figure 1: Pedestrian road fatalities by age and gender, Australia 1998–2002



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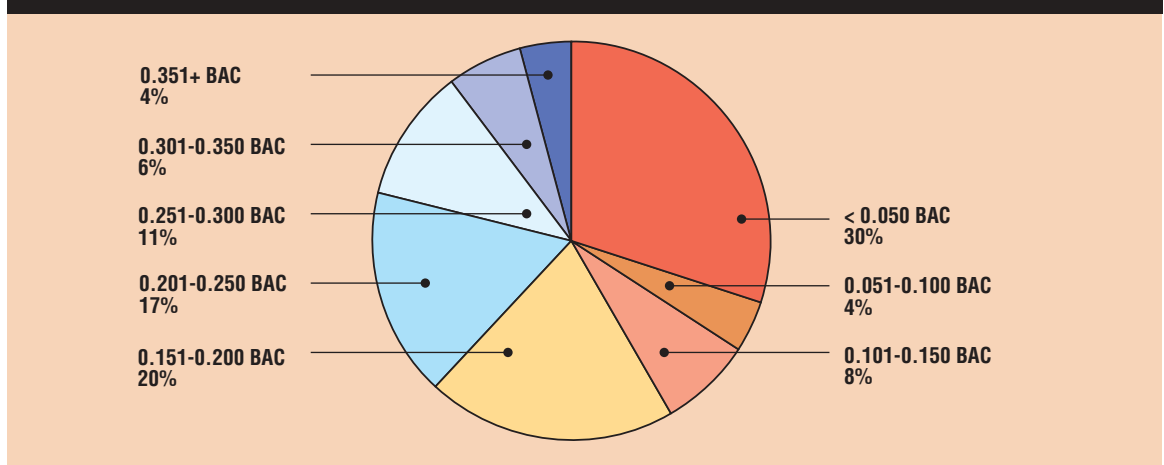
Figure 2: Time of fatal collisions involving male pedestrians aged 15 to 54, Australia 1997–1999



Key facts

- ▶ Males aged 15 to 54 contributed 38 per cent of all pedestrian fatalities between 1998 and 2002.
- ▶ Coronial records from 1997 to 1999 indicate that fatal collisions involving these pedestrians occurred mostly between the hours of 6 pm and 6 am, particularly at the end of the working week and on weekends. In two of every three cases, the primary cause was intoxication with alcohol or other drugs, predominantly on the part of the pedestrian.
- ▶ The results of toxicology tests indicated that 70 per cent of the deceased male pedestrians had a blood alcohol concentration (BAC) that would have made them ineligible to be in control of a motor vehicle. A large majority of these alcohol-affected pedestrians (five of every six) had high-range BACs of 0.15 gm/100ml or greater.
- ▶ Although a precise picture of the prevalence of other drugs could not be obtained due to lack of relevant tests for about one in every three of the deceased, a significant incidence of some drugs was nevertheless apparent. These included cannabinoids (detected in 24 per cent of tests); benzodiazepine tranquillisers (five per cent); amphetamines (four per cent) and heroin/methadone (four per cent).
- ▶ Heavy intoxication is reflected in the manner in which many of the pedestrians came into collision with vehicles. While 43 per cent of the pedestrians had been struck while crossing the road, 33 per cent had been struck while standing or lying on the road rather than attempting a crossing.

Figure 3: Blood alcohol concentrations of fatally injured male pedestrians aged 15 to 54, Australia 1997–1999



(In 24 per cent of cases the pedestrian had been struck by the wheel or undercarriage of a vehicle).

- ▶ Only one in every 14 pedestrians attempting to cross the road had been doing so at a pedestrian crossing or other controlled location. In at least 16 per cent of cases, a pedestrian crossing or an intersection controlled by traffic lights had been available within 100 metres of the person attempting to cross the road, but had not been used.
- ▶ Although the majority of these pedestrian fatalities occurred within cities and towns, the incidence of collisions out of town was much greater than would be expected on the basis of the population of those areas. Rural highways accounted for 19 per cent of collisions and other out-of-town rural roads accounted for 10 per cent of fatal collisions.
- ▶ Whereas males aged 15 to 54 contribute one in every three pedestrian fatalities in

the cities and towns, they contribute two in every three pedestrian fatalities out of town.

- ▶ Indigenous Australians contributed 30 (14 per cent) of the 217 fatalities for which coronial documentation provided information on ethnic background, a much higher proportion than the group's representation in the Australian population (2.5 per cent). (Given that ethnicity was unstated for 142 fatalities, this finding should be interpreted with some caution.)
- ▶ Primary 'responsibility' for the collision was assessed as fully attributable to the pedestrian in 76 per cent of cases and partly attributable to the pedestrian in an additional 12 per cent of cases.
- ▶ According to the coronial material, only a small proportion of the deaths (eight per cent) stemmed from risky road use on the part of the driver.

Characteristics of Australian road fatalities involving male pedestrians aged 15 to 54, 1997–1999

Pedestrian's demographic characteristics

<i>Age group</i>	<i>Number dead</i>	<i>Per cent (known cases)</i>
15 to 24	136	37.9
25 to 34	116	32.3
35 to 44	56	15.6
45 to 54	51	14.2
Ethnicity		
Non Aboriginal, non Torres Strait Islander	187	86.2
Aboriginal or Torres Strait Islander	30	13.8
Unstated ethnicity	142	-
Geographic region of collision		
In a city of population 100,000 or greater	169	48.4
In an urban centre of population 1,000 to 99,999	71	20.3
In a locality of population 200 to 999	8	2.3
Out of town	101	28.9
Unstated region	10	-
Time of occurrence of collision		
Day of week		
Monday	23	6.4
Tuesday	31	8.6
Wednesday	40	11.1
Thursday	58	16.2
Friday	74	20.6
Saturday	75	20.9
Sunday	58	16.2
Time of day		
6:00 am to 11:59 am	19	5.3
12 noon to 5:59 pm	36	10.0
6:00 pm to 11:59 pm	175	48.7
12 midnight to 5:59 am	129	35.9

Nature of collision

Pedestrian's road manoeuvre

Pedestrian struck while standing or lying on road	117	32.6
Pedestrian proceeding from kerb/median struck on far side of road	80	22.3
Pedestrian proceeding from kerb struck on near side of road	73	20.3
Pedestrian struck while walking with traffic	32	8.9
Prior vehicle occupant or mechanic struck while attending vehicle at roadside (or run over by vehicle being attended)	18	5.0
Pedestrian struck while walking against traffic	5	1.4
Pedestrian struck on footway	5	1.4
Collision involving skateboard rider	3	0.8
Other type of pedestrian collision with road vehicle	26	7.2

Presence of traffic controls where pedestrian attempted to cross

Pedestrian attempted to cross at a controlled location	11	7.2
Pedestrian attempted to cross at an uncontrolled location:		
- within 100 metres of a traffic control	25	16.3
- more than 100 metres from a traffic control	89	58.2
- unstated whether or not a traffic control in the area	28	18.3
Pedestrian had not been crossing the road when hit	206	-

Pedestrian's point of fatal impact with vehicle

Fatal impact with windscreen	118	36.3
Other/unspecified frontal impact	107	32.9
Fatal impact with wheel or undercarriage	77	23.7
Fatal non-frontal impact	23	7.1
Unknown point of impact	34	-

Collision environment

Type of road	Number dead	Per cent (known cases)
Urban arterial or highway	131	37.6
Other urban road	116	33.3
Rural highway	65	18.7
Other rural road	36	10.3
Unstated type of road	11	-
Road configuration		
Urban two-way undivided road	137	41.1
Urban road divided with a median strip	78	23.4
Urban dual carriageway freeway	21	6.3
Rural two-way undivided road	71	21.3
Rural road divided with a median strip	14	4.2
Rural dual carriageway freeway	9	2.7
Other road	3	0.9
Unstated configuration	26	-
Speed limit		
0 to 60 km/hr	142	44.7
65 to 95 km/hr	93	29.2
100+ km/hr	83	26.1
Unstated speed limit	41	-
Proximity to an intersection		
Mid-block	321	89.9
At intersection or roundabout	36	10.1
Unstated location	2	-
Horizontal road alignment		
Straight	298	86.1
Curved within 100 metres of collision site	48	13.9
Unstated alignment	13	-
Weather conditions		
Fine	304	90.5
Rain, fog or other adverse conditions	32	9.5
Unstated weather conditions	23	-
Lighting		
Daytime	58	16.2
Night, dawn, dusk:		
- with poor street lighting or no street lighting	191	53.2
- with good street lighting	51	14.2
- with street lighting of unstated effectiveness	29	8.1
- presence of street lighting unstated	30	8.4
Causal factors and overall responsibility		
Pedestrian's blood alcohol concentration (BAC)		
Below 0.050 gm/100ml	91	30.1
0.050 to 0.149 gm/100ml	35	11.6
0.150 gm/100ml or greater	176	58.3
Unstated blood alcohol reading	57	-
Presence of cannabinoid in pedestrian's blood		
Cannabinoid not present	180	76.3
Cannabinoid present	56	23.7
Test not conducted	123	-
Presence of other drugs in pedestrian's blood		
<i>(Note: some individuals have been recorded in multiple categories)</i>		
Benzodiazepine tranquillisers	12	5.4
Amphetamines	9	4.0

Morphine associated with heroin use or methadone	8	3.6
Anti-depressants	3	1.3
Cocaine	1	0.4
Toluene associated with glue sniffing	1	0.4
Test not conducted	136	-

Major causal factor for the collision

Pedestrian's alcohol intoxication	143	41.4
Pedestrian's alcohol and drug intoxication	52	15.1
Pedestrian's drug intoxication	11	3.2
Driver's alcohol or drug intoxication	15	4.3
Both pedestrian's and driver's alcohol/drug intoxication	9	2.6
Pedestrian's misjudgment, error or failure to observe	50	14.5
Driver's misjudgment, error or failure to observe	26	7.5
Dangerous driving, speeding or ignoring signals	11	3.2
Other factor (pedestrian)	28	8.1
Unknown	14	-

Overall responsibility for the collision

Pedestrian primarily responsible	267	75.9
Driver primarily responsible	44	12.5
Both pedestrian and driver responsible	41	11.6
Unknown responsibility	7	-

Nature of pedestrian's injuries

Location of severe^(a) injuries

Severe injuries to head & other body region	149	49.8
Severe head injuries alone	66	22.1
Severe chest injuries alone	24	8.0
Other severe injuries	40	13.4
No severe injuries	10	3.3
Death from secondary effect of injuries ^(b)	10	3.3
Unstated injuries	60	-

Timing of death

Prior to medical/ambulance assistance	210	59.3
During medical/ambulance assistance or in transit	18	5.1
In hospital	126	35.6
Unstated time of death	5	-

Total male pedestrians killed of age 15 to 54 included in table

Total male pedestrians of age 15 to 54 killed during 1997, 1998 & 1999	359	100
Cases for which information is currently unavailable	10	-
	369	-

(a) Severe injuries are those having an Abbreviated Injury Scale score of 4 or greater.

(b) Deaths resulting some time after the collision from the failure of an organ or system other than that directly injured in the collision as a secondary effect of those initial injuries.